

MONTHLY WEATHER REVIEW.

Editor: Prof. CLEVELAND ABBE.

VOL. XXV.

MAY, 1897.

No. 5

INTRODUCTION.

The MONTHLY WEATHER REVIEW for May, 1897, is based on 2,927 reports from stations occupied by regular and voluntary observers, classified as follows: 143 from Weather Bureau stations; numerous special river stations; 33 from post surgeons, received through the Surgeon General, U. S. Army; 2,588 from voluntary observers; 96 received through the Southern Pacific Railway Company; 14 from Life-Saving stations, received through the Superintendent United States Life-Saving Service; 32 from Canadian stations; 1 from Hawaii; 20 from Mexican stations. International simultaneous observations are received from a few stations and used together with trustworthy newspaper extracts and special reports.

Special acknowledgment is made of the hearty cooperation of Prof. R. F. Stupart, Director of the Meteorological Service of the Dominion of Canada; Mr. Curtis J. Lyons, Meteorologist to the Government Survey, Honolulu; Dr. Mariano Bárcena, Director of the Central Meteorological Observatory of Mexico and Commander J. E. Craig, Hydrographer, United States Navy.

The REVIEW is prepared under the general editorial supervision of Prof. Cleveland Abbe. Unless otherwise specifically noted, the text is written by the Editor, but the meteorological tables contained in the last section are furnished by Mr. A. J. Henry, Chief of the Division of Records and Meteorological Data.

CLIMATOLOGY OF THE MONTH.

GENERAL CHARACTERISTICS.

The month was remarkable for the unprecedented flood in the lower portion of the Mississippi River, which had, however, begun to decline at the close of the month. The rainfall in the upper watershed of the Rio Grande was remarkably heavy, thus preparing for the subsequent floods in the lower part of the river. The mean temperatures were the highest on record at several stations in the northern Plateau and north Pacific Slope and California. It was the lowest on record at several stations in Indiana, Ohio, Kentucky, and Tennessee.

ATMOSPHERIC PRESSURE.

[In inches and hundredths.]

The distribution of mean atmospheric pressure reduced to sea level, as shown by mercurial barometers, not reduced to standard gravity, and as determined from observations taken daily at 8 a. m. and 8 p. m. (seventy-fifth meridian time), is shown by isobars on Chart IV. That portion of the reduction to standard gravity that depends on latitude is shown by the numbers printed on the right-hand border.

The mean pressure during the current month was highest off the coast of Washington and Oregon; it was lowest in Arizona, and low in eastern Montana.

The highest reduced pressures were: In the United States, Tatoosh Island, 30.10; Fort Canby and Eureka, 30.07; Seattle, Des Moines, Kansas City, St. Louis, Knoxville, Chattanooga, New Orleans, Mobile, Pensacola, and Charleston, 30.06. In Canada, Bermuda, 30.14; Halifax, 30.05; Sydney, 30.04. The lowest were: In the United States, Yuma, 29.76; Phoenix, 29.77; Fresno, 29.86; Havre, 29.88; Miles City, 29.89. In Canada, Prince Albert, 29.83; Edmonton, Swift Current, and Rockcliffe, 29.92.

As compared with the normal for May, the mean pressure

was generally in excess, except slight deficiencies in Oregon California, and the Lake Region.

The greatest excesses were: In the United States, Wichita, 0.13; Oklahoma, Kansas City, and Des Moines, 0.12; Bismarck, St. Louis, Dodge City, Amarillo, and Abilene, 0.10. In Canada, Bermuda and Halifax, 0.08; Sydney, Minnedosa, and Calgary, 0.07. The deficits were: In the United States, Yuma, 0.08; Oswego, 0.05; Portland, Oreg., Roseburg, and Fresno, 0.04. In Canada, Rockcliffe, Kingston, and Toronto, 0.02.

As compared with the preceding month of April, the pressures reduced to sea level show a slight rise in Iowa and Missouri, Cape Breton, and Newfoundland, but a fall in all other regions.

The greatest rises were: In the United States, Omaha, 0.03; Des Moines, Kansas City, and Wichita, 0.02. In Canada, St. Johns, N. F., 0.07; Sydney, 0.03. The greatest falls were: In the United States, Salt Lake City, 0.18; Fresno, 0.16; Idaho Falls, Winnemucca, and Red Bluff, 0.15; Carson City, Harrisburg, New York, Atlantic City, and Hatteras, 0.14. In Canada, Kingston, 0.12; Ottawa, Rockcliffe, Parry Sound, Toronto, Saugeen, 0.11.

AREAS OF HIGH AND LOW PRESSURE.

By Prof. H. A. HAZEN.

During the month the apparent paths of seven highs and eleven lows were sufficiently well defined to be traced on the accompanying charts, I and II. The following table gives the principal facts regarding the origin, movement, and point of disappearance of these highs and lows.

The following general remarks are added: The highs and lows of the month have been remarkably well defined for this season of the year. The general transference has been quite uniform, except when starting in the Pacific or north of Montana.